

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PC-9303	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/JP2004/012222	International filing date (day/month/year) 19/08/2004	(Earliest) Priority Date (day/month/year) 20/08/2003
Applicant SHOWA DENKO K.K.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows: *the text has been established by this Authority to read as follows: 2004.08.19*

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☒ none of the figures is to be published with the abstract.

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4, 17 (part), 18 (part)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, 17(part), 18(part)

Cubic boron nitride having a certain magnesium content, a grinding wheel comprising the same and a sintered compact comprising the same.

2. claims: 5-16, 17(part), 18(part)

A method for producing cubic boron nitride using a catalyst substance which comprises a lithium source, a magnesium source and a carbon source, the product obtainable by the process, a grinding wheel comprising the product obtainable by the process and a sintered compact comprising the product obtainable by the process.

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International Application No

PCT/JP2004/012222

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09K3/14 C01B21/064 C04B35/5831 B24D5/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09K C01B C04B B24D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data, COMPENDEX, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 332 629 A (SUMIYA ET AL) 26 July 1994 (1994-07-26) claim 1; figure 14; examples; table 3 -----	1-4, 18
X	EP 0 407 946 A (SUMITOMO ELECTRIC INDUSTRIES, LIMITED; SUMITOMO ELECTRIC INDUSTRIES, L) 16 January 1991 (1991-01-16) claim 1; examples -----	1-4, 17, 18
E	WO 2004/069399 A (SHOWA DENKO K.K; OTSUBO, HIROHIKO; IHARA, EIJI; TSUJI, KATSUYUKI) 19 August 2004 (2004-08-19) claims -----	1-4, 17, 18
E	-& US 2004/265203 A1 (OHTSUBO HIROHIKO ET AL) 30 December 2004 (2004-12-30) claims 1,3 -----	1-4, 17, 18

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

8 February 2005

Date of mailing of the international search report

13.05.05

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Munro, B

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/012222

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5332629	A	26-07-1994	JP 61119352 U	28-07-1986
			JP 61275168 A	05-12-1986
			CA 1275560 C	30-10-1990
			DE 3584515 D1	28-11-1991
			EP 0194358 A1	17-09-1986

EP 0407946	A	16-01-1991	JP 2029661 C	19-03-1996
			JP 3045561 A	27-02-1991
			JP 7061902 B	05-07-1995
			DE 69017776 D1	20-04-1995
			DE 69017776 T2	13-07-1995
			EP 0407946 A1	16-01-1991
			US 5340780 A	23-08-1994

WO 2004069399	A	19-08-2004	WO 2004069399 A1	19-08-2004
			US 2004265203 A1	30-12-2004

US 2004265203	A1	30-12-2004	WO 2004069399 A1	19-08-2004
